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ABSTRACT

This document reviews literature on gender equity in U.S. schools. The paper reports that there is an unconscious ignorance on the growing achievement gap between male and female students. Young women in the United States today still are not participating equally in the education system. A 1992 report found that girls do not receive equitable amounts of teacher attention and that they are less apt than boys to see themselves reflected in the materials they study. The problem seems archaic, but the idealized family of a working father and homemaking mother is a reality in only 6 percent of U.S. households now. As technological advances allow businesses to reduce the number of hours employees work and the number of employees required to do a job, two incomes will usually be necessary to provide basic necessities. By the year 2000, 88.5 percent of new entrants to the work force will be women and minorities. Equity in education must be achieved for the United States to compete effectively in the global marketplace. Many curriculums, which are seen as the central message-giving instrument of schools, are often guilty of ignoring the importance of gender equality in education. Strong messages are being sent to boys and girls about what is important, valued, and acceptable in terms of sex role stereotypes. A 1984 study concluded that females are less likely to be studied in history and read about in literature, mathematics and science problems are more likely to be framed in male stereotypic terms, and illustrations in most texts depict a world populated and shaped mostly by males. A 1982 study suggested that the worst effects of a sex stereotyped curriculum has been to make children, especially boys, feel that sex discrimination is a natural process that everybody follows. Another study reports that girls are the only group who enter school scoring ahead, and 12 years later leave school scoring behind. (DK)

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Gender Equity in Education

A Review of the literature

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Introduction

There is an unconscious ignorance on one of education's most shocking and perplexing problems: the growing achievement gap between the male and female students. Young women in the United States today are still not participating equally in our education system. A recent report from the American Association of University Women (AAUW, 1992) found that girls do not receive equitable amounts of teacher attention and that they are less apt than boys to see themselves reflected in the materials they study. This problem seems archaic when the twenty-first century is quickly approaching. The idealized American family with a father who works and a mother who cares for the children and does not work is a reality in only 6 percent of all households (Darling & Sorg, 1993). The traditional question for women of this century--to work or not to work--may not even exist in the 21st century. Cetron (1984) believes, as technological advances allow businesses to reduce the number of hours employees work and the number of employees required to do a job, two incomes will usually be necessary to provide educational advantages, food, clothing, and shelter. In addition, women will continue to enter professional fields in greater numbers, may not interrupt their careers for childrearing, and will have more influence on policymakers in government and business because they will be wealthier, hold more powerful positions, and be more numerous than before. By the year 2000, 88.5 percent of new entrants to the work force will be women and minorities,

it is clear that equity in education must be achieved for America to compete effectively in the global marketplace of the next century (1991, as cited by Dempsey & Vandell).

Since students are affected daily by the equity related events that occur outside the school walls, social consciousness should be a central theme in the kindergarten through high school curriculums in order to try and eliminate the gender gap in education. If women's cultures were taken more seriously in educational planning, educators would give far more attention to social issues and curriculums might have a very different emphasis. Unfortunately, the California History-Social Studies Framework (1988) is the only California framework that addresses the topic of gender equity. The subject of gender equality can be located in the framework under the category of Democratic Understanding and Civic Value under the strand of National Identity in the following way: "Students should be aware of the history of prejudice and discrimination against minorities and women as well as efforts to establish equality and freedom." In a democracy, schools must address the educational needs of all students. Each student should find herself or himself reflected in the curriculum. When this happens, the student should learn and grow.

Many curriculums, which are seen as the central message-giving instrument of schools, are often guilty of ignoring the importance of gender equality in education. Strong messages are being sent to boys and girls about what is important, valued, and acceptable in terms of sex role stereotypes. According to Sadker, Sadker, and Steindam (1984), females are less likely to be studied in history and read about in literature, math and science problems are more likely to be framed in male stereotypic terms, and illustrations in most texts depict a world populated and shaped

mostly by males. These messages seem to be part of the sexist curriculum material that is inserting sex bias into the socialization of young people (Smith, Greenlaw, & Scott, 1987). According to Ornstein and Levine (1982, as cited by Smith Greenlaw, & Scott), perhaps the worst effects of a sex stereotyped curriculum has been to make children, especially boys, feel that sex discrimination is a natural process that everybody follows. Educators need to become aware that their unconscious selection of curriculum materials may serve to convey specific values which maintain and may even widen the existing gender gap between boys and girls.

The decline of academic achievement experienced by half of our population has been an invisible issue. Sadker and Sadker report that girls are the only group who enter school scoring ahead, and twelve years later leave school scoring behind. When low reading achievement had been addressed with federal programs and funds, boys especially benefited since they outnumbered the girls five to one (1989). Yet, the math and science deficits that so frequently trouble females remain an unaddressed concern in many frameworks and curriculums. To ensure all America's children a window of opportunity in the nation's classrooms, a reformed movement should address the academic deficits of girls with the same fervor and finances devoted to resolving academic problems that historically plague boys (Sadker & Sadker, 1989). To leave girls on the sidelines in discussions of educational reform is to deprive ourselves of the full potential of half of our work force, half of our citizenry, and half of the parents of the next generation (AAUW, 1992).

Statement of the Problem

In an attempt to eliminate sex role stereotypes to ensure equal education for girls and boys, a biased curriculum seems to be a central problem that may indirectly lower self-esteem in female students. Educators who are equitable in their teaching approaches understand that growing and learning takes place when there is an expansion of experiences in the curriculum, not when there are restrictions or omissions in the content the students are studying. Curriculum materials, literature, and texts often show girls in passive roles while boys are shown in active roles, women are portrayed in traditional female roles, and male characters outnumber females dramatically in content and illustrations. Research on United States history texts revealed that material on women comprised no more than 1 percent of any text, and that women's lives were trivialized, distorted, or omitted altogether (AAUW, 1992). Emily Style suggests that an inclusive curriculum provides students with a balance of windows - to frame and acknowledge the diverse experiences of others - and mirrors - to reflect the reality and validity of each student (1991, as cited by Nodddings). If many of the curriculums do not address the issue of gender equality, educators need to understand the process of learning to teach inclusively includes unlearning as well. These negative and invisible messages delivered to girls by the school curriculum hurt their self-esteem, as girl's lives are shown to count for less than boys.

Another problem exists when there is an unconscious ignorance of gender unequitable treatment by both teachers and parents. The

advancement of sexism is not always intentional. Simbol (1989) believes most sexism is habit and tradition; many parents and teachers do not intend to promote sexism. Unfortunately, habit and tradition are encouraged, even defended, in many organized school structures. Girls receive significantly less teacher attention than boys. Greenberg (1989, as cited by AAUW) states that girls enter preschool ahead of boys in impulse-control, small muscle development, and language enhancement. Since many girls tend to achieve competency in these areas before they arrive in group settings at school, teachers turn their attention toward boys, whose development in these areas lag behind that of girls. According to Wright (1991, as cited by Deuerling), teachers ignorantly give boys more attention in school by: calling on them more frequently, allowing boys more response time, and asking them higher order questions than girls. Thus, the classrooms consist of two worlds: one of boys in action, the other of girls' inaction. Since parents are their children's first and most enduring teachers, they also need to be aware of unconscious gender unequitble treatment of their children at home. Sadker and Sadker (1994) report even the most well-meaning adults can inadvertently let sexist expectations slip into their own behavior as told by a Vermont teacher:

> "At my last parent-teacher conference, a mother praised her daughter for being a real 'go-getter.' She said that her daughter wanted to be a doctor. I was shocked when she went on to say that she told her daughter to try being a nurse first, and then if she liked it, she could become a doctor."

Gender equity needs to be addressed as a issue worthy of attention in the classroom and at home. If parents are not aware and educated on how to

provide a gender-free learning environment, the schools' efforts may be sabotaged.

Sex discrimination by outside influences other than the home are also a problem that emphasizes the need for gender equity in education. Many people look at gender issues in education with the masculine experience as the standard. The male experience is the standard not only in education but, more generally in all of public policy (Noddings, 1992). From an early age, children engage with gender ideology in taken-for-granted ways of speaking and interacting in the culture (1993, as cited by Kamler). They encounter stereotypes at home, school, in literature, television programs, and the media through advertisements. Thorne (1993) believes that children are socialized into existing gender arrangements by the gender-stereotyped clothes, toys, and magazine covers that make claims about biological programming. In short, if boys and girls are different, they are not born that way, but *made* that way.

Low self-esteem and biased standardized tests are additonal issues which shortchange girls in schools. Sadker and Sadker (1994) report by the end of middle school, smart girls report they are more worried and afraid, and less encouraged and appreciated, than they were in elementary school. They also contend that girls are winners on report card and later on college transcripts, yet the boys attain higher scores on the standardized tests. In the early grades, girls' scores on standardized tests are generally equal to or better than boys' scores; however, by the end of high school, boys score higher on such measures as the NAEP and the SAT (Dunne & Rose, 1989).

Gender inequality is not confined to girls, but also affects boys as well. Although male students dominate the classroom climate by asking

more questions and receiving more praise and help from the teacher, they also receive more criticism for their work. Males as well as females benefit from the experience of caring for others, and if these opportunities are denied, boys may loose touch with their own emotions (Sadker & Sadker, 1994). As a result, many boys grow up to be men that hide their emotions so well, they no longer know what they are. While boys may control the classroom, they are also more likely to fail a course, miss a promotion, drop out of school, and dominate accident, suicide, and homicide statistics (Sadker & Sadker, 1994). While girls suffer silently in schools, the miseducation of boys is a loud problem that cannot go unnoticed.

All of the key problems described above seem to be a call to address the area of gender equity in education and not ignore the issue. The educational message of gender inequity may seem insignificant by itself, but combines to form a subtle pattern that slowly takes an academic and psychological toll over the years.

Definitions

The following definitions were found throughout the literature review which are important in the study of gender equity:

- **androgyny:** comes from the two greek words--andros (male) and gyne (female)-- and is often defined as "being sex-role flexible." A theoretical and practical concept that reflects the changing occupational structure of american society plus the evolving roles of males and females (Pardeck & Pardeck, 1985).

•bias: A mental slant or leaning to one side; and inclination of temperament or outlook; a highly personal and unreasoned distortion of judgment. Biased, warped, or prejudiced thinking about an object, issue, or group of people (Iowa State Department of Education, 1989).

•bibliotherapy: Pardeck and Pardeck (1985) simply define this as helping with books: the use of children's books to facilitate identification with and exploration of sex role behavior and helping children to meet their developmental needs through the use of literature.

•discrimination: An overt or subtle act prompted by prejudice. Unjust generalization based on normal preferences lead to the formation of prejudice, which if not recognized and controlled, breeds discrimination. Racism, sexism, handicappism, and ageism are forms of discrimination (Iowa State Department of Education, 1989).

•equality: the equal claim of each person to the right to develop his or her potential as a human being free from arbitrary distinctions and unfair discrimination. Each person has the right to participate equally in government and to be treated by those in authority without bias and restriction because of race, religion, sex, ethnic origin, or nationality (U.S. Constitution, Article V; amendments I, XIV, XV, and XIX).

•equity education: Education based on fair and equal treatment of all members of all of our society, regardless of race, color, national origin, sex, age, language, lifestyle, handicap, or socioeconomic status; the structuring of educational priorities, processes, and commitments to reflect U.S. diversity (Iowa State Department of Education, 1989).

•gender: different sets of expectations and limitations imposed by society on girls and boys simply because they are female or male (1992, AAUW). Pardeck and Pardeck (1985) defined gender as when the label of "boy" or "girl" becomes the central organizer and determinant of many of the child's activities, values, and attitudes.

●gender politics: the unequal treatment of women and men in our society; virtually absent in most of the nation's classrooms (AAUW, 1992).

●gender sensitivity: the constant awareness of the workings of sex and gender (Roop, 1989).

●sex bias: The National Counsel of Teachers of Foreign Languages (1992, as cited in AAUW) listed five forms of sex bias found in instructional materials: exclusion of girls, stereotyping of members of both sexes, subordination of attention to contemporary issues or social problems, and cultural inaccuracy. In 1990, the National Education Association identified further markers of sex bias in the the classroom: double standards for males and females, condescension, tokenism, denial of achieved status on authority, backlash between women who succeed in improving their status, and divide-and-conquer strategies that praise an individual as better than others in their gender group (AAUW, 1992).

●sexism: An assumption that each sex has a distinctive make-up that determines the development and role of their respective lives; that one sex is superior and has the right to rule the other. It is the degree to which an individual's beliefs or behaviors are prejudiced on the basis of sex. Sexism is the collection of institutional policies, practices, and structures which subordinated or limit a person on the basis of sex. Power plus sex bias equals sexism (Iowa State Department of Education, 1989).

●sex role stereotype: stereotypes based on roles assigned to persons because of their sex (Deurling, 1992). Mental categories that are based on exaggerated, inaccurate, and rigid favorable or unfavorable generalizations about a microcultural group. It is prejudiced thought used to describe all members of a group (Iowa State Department of Education, 1989).

●sex typing: Pardeck and Pardeck (1985) define this as sex role training starting at birth when appropriate sexual responses are rewarded and sex inappropriate behaviors are punished. In the development of sex roles, children learn to prefer behaviors and activities that are accepted as appropriate for their own sex (AAUW, 1992).

•socialization: the process by which a person slowly develops a set of values and attitudes, likes and dislikes, goals and purposes, patterns of response and concept of self. This image of self is arrived at gradually, through a complicated process which continues throughout life (Smith, Greenlaw, & Scott, 1987).

•stereotype: Deurling (1992) defines this as a standardized mental picture based on a common characteristic of a group of people. An oversimplified opinion or an uncritical judgement and is not reality-based. Stereotyping can be both socially and academically harmful for children. Timm (1988) states that a stereotype is the assigning of overgeneralized attributes or roles to members of cultural groups.

History

In the schoolroom more than any other place, does the difference of sex, if any, need to be forgotten.
-Susan B. Anthony, 1856

Early Theorists & Unscientific Theories

In the 1700's, eminent educational theorist Rousseau believed that women were not qualified for research in abstract areas such as mathematics and science because their brains were unfit (Campbell, 1991). The nineteenth century continued to promote and publish unscientific theories to keep women and girls at home. The science of craniology taught that brain size revealed intelligence. Since it was believed that childbirth stunted women's evolutionary development, their

brains were thought to never be as big or as complex as those of men (Sadker & Sadker, 1994). In 1873, Dr. Edward Clarke wrote a book entitled Sex in Education in order to explain why women should avoid higher education. He asserted that prolonged coeducation was physically dangerous to the reproductive health of females. Clarke explained that if young women attended school during adolescence, blood would be diverted from their reproductive organs to the brain, and the result would be "monstrous brains and puny bodies (Sadker & Sadker, 1994)." While such ideas are clearly outdated, there are still some relevance in these ideas in the twentieth century.

The Early Education of Women

For almost two centuries of American education, following European traditions, barred girls from school. An education was open for men only, while women were usually viewed as morally and mentally inferior and were taught domestic skills only. The early colleges of the 1800's were "mixed schools" where boys and girls were headed for different destinies and they should be educated separately for their distinct life paths (Sadker & Sadker, 1994). Seminaries were also a popular form of education for women in the early nineteenth century. The seminary curriculum taught the four M's: monrals, mind, manners, and motherhood. Teaching was considered an appropriate career for women (Sadker & Sadker, 1994). In the late 1800's ivy league colleges began to develop separate colleges for women. They were expensive (one woman who attempted to get into Harvard made a "gift" of $306,000 in 1891) and

several of these colleges reported that they earned higher grades than men (Sadker & Sadker, 1994). Coeducation enrollment in America became more popular than single-sex institutions. Mary Wollstonecraft argued in 1833 that boys and girls should be educated together in order to shut out "gallantry and coquetry" and promote "friendship and love to temper the heart for the discharge of higher duties (1992, as cited by Murdaugh & Rebell)." The nineteenth century saw a rapid increase in female enrollment in American schools, especially with compulsory education, and by 1890, there were actually more girls enrolled in American high schools than boys (1992, as cited by Murdaugh & Rebell).

The Twentieth Century: A Chance For Recovery...Again?

In 1957, the Soviet launching of Sputnik frightened americans into passing the National Education Act which provided federal funding to purchase children's books. An emphasis was placed on science and technology which unintentionally boosted sexism in school materials: literature books were aimed at boys to prepare them for future science related careers (Nilsen, 1987). A study conducted by Hillman (1984, as cited by Collins, Ingoldsby, & Dellman) examined the portrayal of male and female characters in children's literature published from the early 1930's to the mid 1970's. His findings conclude that as early as the 1930's, young children's literature has reinforced the traditional role of the active male and passive female.

Then the feminist movement of the 1970's arrived with a widespread influence on education and the creation of curriculum

materials. Nilsen believes that to make up for past inequalities, many texts and curriculum materials focused exclusively on women. Some of these books had such an obviously feminist bias that political messages overshadowed career information, and the books failed to reach the broad audience of both sexes (1987). In 1972 Title IX of the Educational Amendments made discrimination on the basis of sex illegal in any educational program receiving federal funding. The AAUW's report on How Schools Shortchange Girls (1992) described Title IX as complaint-driven over the past decade and the U.S. office of Civil Rights has not actively pursued its enforcement. In 1974, Congress passed the Women's Educational Equity Act (WEEA) to fund research, materials, and training to help schools eliminate sex bias. As the 1970's drew to a close, the power of Title IX and WEEA were not fullfilled and many schools did not take either issue seriously (Sadker & Sadker, 1994). Sadker & Sadker (1994) reported that between 1972 and 1991, no school lost a single dollar of federal funds because of sex discrimination.

A Nation at Risk was then published in 1983 by the U.S. Department of Education to promote school reform across the country. When the reports were reviewed by a special tasks force and commission of the American Association of University Women (AAUW) to assess the amount of attention given to gender and sex equity issues, the findings were bleak: most of the reports do not define the educational issues under review in terms of gender, nor do they include sex as a separate category in their data analysis and background information (AAUW, 1992).

In 1991, educational goals were made by President Bush to be met by the year 2000. The President and the Department of Education presented these goals in "America 2000" as a plan to move every community in

America toward these goals. The AAUW (1992) reported that none of the strategies proposed in "America 2000" are gender specific. Once again, girls are ignored on the national agenda in education.

Issues, Controversies, Programs, and Contributors

Throughout the review of the literature, there were no arguments made by contributors that were against the topic of gender equality in the classroom. Their concerns were directed at the lack of attention and ignorance regarding the growing gender gap between the boys and girls in education today. In order for this gap to be lessened, the following issues for curriculum change need to be addressed: the evaded curriculum of gender equity, the growing level of low self-esteem in girls, a new emphasis on teacher education, outside influences which effect gender equity in the classroom, and challenging male stereotypes.

The Evaded Curriculum

The first step in ensuring boys and girls receive an equal education is addressing gender equity as a meaningful subject in the curriculum and not avoiding it. Challenging the formal curriculum is a tough battle, and it is likely to meet with stiff resistance from administrators, teachers,

parents, and the schools. Since gender bias is not a noisy problem, most people are unaware of the secret sexist lessons and the quiet losses which both girls and boys engender.

Biased literature and textbooks seem to be at the core of the equity problem, as most teachers (and parents who home teach or read with their children) rely on these materials to guide their curriculum and teaching materials. An example of sexual stereotyping in literature is found among the Caldecott award winning books: the majority of females in these books are shown a caretakers (mothers, princesses, helpers in the kitchen, teachers, and nurses) and the males act in the a larger sphere as fighters, explorers, and adventurers (Temple, 1993). In addition, the Caldecott winners from 1953 through 1971, had eleven times as many boys as men pictured as girls and women, ninety-five as many male animals to female animals, and in one-third of the award winners, there were no women at all (1994, as cited by Sadker & Sadker). In a 1975 study entitled Dick and Jane as Victims conducted by The Women on Words and Images, 134 elementary school readers from sixteen different publishers were studied. The results are found in the following ratios and seem to stress the need for curriculum and literature reform (1994, as cited by Sadker & Sadker):

Boy-centered stories to girl-centered stories	5:2
Adult male characters to adult female character	3:1
Male biographies to female biographies	6:1
Male fairy tale stories to female fairy tale stories	4:1

Sadker and Sadker (1994) add that several studies have shown that in basal readers the activity girls are most often engaged in is watching boys in action. In additon, girls and women are almost invisible in our

history and science books. In the 1970's, an analyses of best selling history books had only two sentences about women, showed the biological oddity of a nation with only founding fathers, and more space was devoted to cowboys than to the women's suffrage movement (1994, as cited by Sadker & Sadker) In addition, none of the history books explained that the reason people may never know how many female inventors are excluded from the pages of our history books is because it was difficult in times past for women to obtain patents in their own names. Many girls must often wonder why the boys' lives in children's books are so much more interesting than girls'. Mem Fox (1993) writes that children's literature may be partly to blame for the fact that grown-up girls have been denied their womanhood the excitement and power so readily available to boys and grown-up boys in this quote:

> Girls can do anything, or so we are told. They can be anything. They can feel anything. Why is it then, that in children's literature they are still portrayed more often than not as acted upon rather than active? As nurturers rather than adventurers? As sweetness and light rather than thunder and lightning? As tentative, careful decision makers rather than wild, impetuous risk takers?

In Writing A Woman's Life, Carolyn Helbrun observes what the results of these textbooks and literature show:

> It is a hard thing to make up stories to live by. We can only retell and live by the stories we have read or heard. We live our lives through texts. They may be read or chanted, or experienced electronically or come to us like the murmurings of our mothers, telling us what conventions demand. Whatever their form or medium, these stories have formed us all; they are what we must use to make new fictions, new narratives (1994, as cited by Sadker& Sadker).

When children read about people in nontraditional gender roles, they are

less likely to limit themselves to stereotypes.

A gender fair curriculum must also use nonsexist language in its literature, texbooks, and teaching materials. Rovano (1991) demonstrates the use of sexist language in this quote: "Sexist language doesn't affect the sexist, because it doesn't affect him. The businessman, policeman, fireman, weightlifter, or doctor does his job without regard to gender in language." This quote eliminates fifty-one percent of the population by rendering it invisible. Rovano (1991) also warns pro-feminist attitudes can be as outrageous as anti-feminist ones. She encourages maintaining a balance, but emphasizing that the use on nonsexist language should not be considered any more political than the use of "ain't" or double negatives. An androgynous language used in the curriculum and in the classroom may be a gender neutral strategy what would be complementary rather than diversive. Turner (1990) feels that an androgynous language will be a balanced tension - supporting rather than opposing.

The lack of curriculum guidelines are not only a problem found throughout the literature, but the accountability issue that teachers, adminstrators, and schools must follow these guidelines, are. The NEA (National Education Association) identified several key barriers to gender equity in the curriculum: the student's reluctance to be singled out as having a gender experience that does not fit the assumed norms, parents' suspicions about unfamiliar curricula, and the schools unwillingness to commit funds for teachers to participate in curriculum change efforts (AAUW, 1992). Gretchen Wilbur (1992, as cited by AAUW) describes a model curriculum for educators, researchers, and schools to follow in the future:

A gender fair curriculum acknowledges and affirms variation (similarities and differences among and within groups of people), it is inclusive (allows both female and males to identify positively with messages about theirselves), it is accurate (information that is data based), it is affirmative (balancing multiple perspectives), and it is integrated (wedding together the experiences, needs, and interests of both males and females.

The Issue of Low Self-Esteem in Girls

When girls sit in classes that, day in and day out, deliver messages that imply girl's lives count for less than boys, low self-esteem is going to be an inevitable outcome for learning (Sadker & Sadker, 1994). Today's schoolgirls face subtle and insidious gender lesson, micro-inequities that appear seemingly insignificant when looked at individually but that have a powerful cumulative impact: these inequities chip away at girls' achievement and self esteem (Sadker & Sadker, 1994). The AAUW report on How Schools Shortchange Girls (1992) conducted a large scale and in-depth clinical studies following individual girls through school. All report significant declines in girls self-esteem and self-confidence as they move from childhood to early adolescence. In addition to the loss of achievement and self-esteem, girls suffer other difficuties as cited by Sadker and Sadker (1994): Eating disorder among middle schools are rampant, school-based sexual harassment are now reported with alarming frequency, one in ten teenage girls becomes pregnant each year, once girls drop out of school they stay out, depression increases as self-esteem drops, and economic penalties follow women after graduation when working in the same jobs as men, they earn less money. A connection can be seen existing between the falling self-esteem, curriculum and

literature omissions, test bias, and classroom inequalities.

Another major issue found consistently throughout the research that indirectly may lower the self-esteem in girls is the discrepancy between report card grades and standardized tests. A contradiction exists between the national standardized test scores, where girls outperform boys. Sadker, Sadker, and Steindam (1989) report that males outperform female students substantially on all subsections of the Scholastic Aptitude Test (SAT) and the American College Testing Program Examination (ACT). They feel that the higher report card grades which girls receive, which are awarded for compliance as well as achievement, mask much of the education deficit. Although biased tests are prohibited by Title IV of the Educational Amendments of 1972, a 1984 analysis of tests found twice as many references to men as women, and more pictures of references to boys than girls (AAUW, 1992). Deurling (1991) suggests that sex bias on test items may be responsible for the discrepancy: the differences in girls and boys measured abilities, the children's expectancies about how they will do in different subjects, and boys receiving positive feedback for academics may all contribute to the gap between standardized tests and report card grades. From middle school to graduate school, gender bias in tests denies girls and women the best educational programs, scholarships, and prizes. The gender gap due to test bias continues in college and beyond: women continue to score lower on all sections of the GRE to enter graduate school, the GMAT for business school, the LSAT for law school, and the MCAT for medical school (1994, as cited by Sadker & Sadker). Lower test scores block females in disproportionate numbers from the finest colleges and the most prestigious graduate schools and professions (Sadker & Sadker, 1994). Other assessment measures,

including standardized tests, highlight the need for gender equity in schools which may help to heighten the self esteem of girls and women. A controversial issue that has it's roots in history was mentioned periodically throughout the literature: single sex classrooms and schools. Many researchers are looking at the these practices as an answer to give girls a chance to be heard in the classroom without the presence of boys, get more teacher attention from their instructors, and learn in an environment where successful strategies are tailored more to girls. Many researchers feel that only in separate institutions can females avoid sexism which characterizes many interactions in coeducational institutions, and which results in women having lower self-esteem (1992, as cited by Murdaugh & Rebell). On the other hand, since coeducation has become more dominant since the women's right movement, many are against single sex institutions. Several feminists believe that when education is segregated, not only do superior facilities and resources tend to go to the group to which society accords superior status, but the single-sex institutions are remnants of an earlier era (1992, as cited by Murdaugh & Rebell). During the 1970's and early 80's, Title IX helped desegregate classrooms and schools. However, in a nationwide survey commissioned by the Coalition of Girls' Schools, girls in single-sex schools seemed to have higher self-esteem, are more interested in nontraditional subjects such as science and math, are less likely to stereotype jobs and careers, are more serious about their studies, and achieve more (1994, as cited by Sadker & Sadker). In today's adolescent society, many girls still think that being bright is in conflict with being popular: the assertive style that leads to intellectual achievement does not mesh with the passive noncompetitive role many boys desire and

expect (Sadker & Sadker, 1994). Thus, a single sex education may refocus a girl's attention on academics rather than popularity.

Teacher Education

Teacher education is an issue that was addressed throughout the literature in which little controversy existed: gender equity awareness and training needs to be included in all educator programs for both the inexperienced and professional teacher. Educators lack of training on gender neutral techniques may also ignorantly contribute biased feedback in the classroom: boys are usually praised for their academics and girls are usually praised for being neat, quiet, and having good printing. Many of these gender inequalities made by teachers are usually due to ignorance and lack of training.

Developing programs to (1) strengthen college teacher pre-education programs to include gender equity awareness and training and (2) create teacher inservice training workshops to educate all experienced teachers was suggested by contributors throughout the review of the literature. The first step in a successful gender equity program is encouraging educators to become less resistant to change and become aware of their own bias patterns. Sadker and Sadker (1994) believe that holding up a mirror, an objective record, helps instructors recognize their own patterns, but looking at the reflection is only the first step on a long journey. They stress that the pattern of female invisibility is stubborn and resists change, but when teachers participate in effective training, they can eradicate gender bias from their instruction. The issue of how teachers might intervene, therefore, is complex and requires teachers who

are willing to deconstruct their own practices (Kamler, 1993). However, controversies arise in regards to pre-service programs for novice teachers. Dunne and Faith (1989) suggest reasons why teacher preparation institutions have been slower to implement sex equity-oriented interventions: (1) most states have been reluctant to interfere with the academic freedom of college professors by imposing required instruction in gender-fair practices for teacher certification programs, (2) administrators of teacher education programs say that novice educators could not manage adding sex-fair teaching instruction to their already over-crowded curriculum, and (3) the teacher preparation curriculum is overwhelmingly male-defined that even an instructor determined to deliver instruction about sex-fair practices is likely to be limited by the unavailability of appropriate texts and materials. If gender equity training does not exist at both the pre-service and inservice levels of teacher education, the following scenario described by Sadker and Sadker (1994) may continue to happen:

> A teacher, a female who could have served as a role model for the girls, both accepted and facilitated the male dominance of the classroom. She herself had been victim of years of sexist schooling and had no idea that she collaborated with a system that stunts the potential of female students. The teacher's student teacher was also indoctrinated into the sexist curriculum and instruction. She would be licensed to teach the following year, and it is quite likely that she will teach gender-biased lessons in a classroom of her own.

In regards to staff inservicing programs, no controversies existed in the literature. The majority of the contributors agreed that training experienced teachers in equity education would benefit not only the teacher, but would also give their students preparation to deal with

gender differences and biases throughout their educational career. In addition, when the teacher is inserviced and empowered to make a choice in the selection of materials, teaching strategies, and evaluative methods to equate the learning experiences of girls and boys, not only should the teacher teach more effectively, but the female students may also develop more self confidence in their abilities.

Outside Influences

In order for gender equity education to be successful in the classroom, educators must be aware of the following outside influences: parents and the media. Sensitizing parents for gender equity awareness at home is essential. Study after study has shown that both teachers and parents, ignorantly underestimate the intelligence of girls: a 1992 survey showed that when adults were asked to picture an intelligent child, 57 percent of women and 71 percent of men visualize male children. In addition, parents attributed more brain power to boys in math and science. These different academic expectations begin as early as first grade and continue throughout school (1994, as cited by Sadker & Sadker). Benbow and Raymond (1989) discovered fathers were somewhat more likely to be cited as the primary sources of quantitative support than were mothers; the reverse was found in the verbal areas. However, some parents, especially mothers, may remember sexist barriers at school and are concerned about providing a fair education for their daughters. Parents need to keep an eye on the curriculum and protest sexism when they see it. They must offer support from the home, refusing to let their daughters vanish into the classroom woodwork and helping them develop the courage

to speak their minds (1994, as cited by Sadker & Sadker). As teachers learn to become educated on gender inequities both in school and outside it's walls, they can help parents, who may help their children learn to be resisting students that challenge the gendered world.

The media is another powerful influence that consistently shows biased images and stereotypes in many forms. Many boys and girls model their lives according to the persistent images presented through television and advertising were money is often an issue and inequity is not. Another example of the media giving children sex stereotypes is found on the cover of Time or Newsweek when they announce that males and females are fundamentally different, and that "they are born that way (Thorne, 1993)." More shocking is the discovery that subliminal lessons in female weight loss emerge in the books that children read at school. In third grade texts published between 1900 and 1980, boys do not change in terms of shape or weight, but girls lost weight and grew relentlessly thinner. Christian-Smith (1989) reports that textbooks, for example, have long used layout and techniques from popular media to interst students. Another form of stereotypes in the media that effects children is found in toys. In 1992 Mattel marketed a Teen Talk Barbie that said such phrases as, "Math class is tough." Fortunately the American Association of University Women warned that this is precisely the kind of role models girls did not need and the Washington Post dubbed the doll "Foot-in-Mouth-Barbie (1994, as cited by Sadker & Sadker)." Even in a 1991 "Sesame Street" television program, gender bias is found with male characters, male voice-overs, and images of male children in the street dominated eight to one over females (1994, Sadker & Sadker). Thus, it becomes the teacher's responsibility to train their students who will

hopefully challenge these stereotypes.

Challenging Male Stereotypes

Within minutes after their birth and being wrapped in a blue blanket, boys are handled differently than girls. From their very first days, children learn gender boundaries: while girls are encouraged to cooperate, boys grow up in a rougher world. Parents, particularly fathers, are more likely to punish sons with physical force and boys learn that the best way to resolve conflict may be a kick or a punch (Sadker & Sadker, 1994). As violence becomes a part of too many boys' lives, empathy and caring are in danger of being extinguished. The Sadkers' (1994) feel gender bias is a two-edged sword: girls are shortchanged, but males pay a price as well. Boys often receive negative responses from peers for engaging in cross-sexual behaviors. In a videotaped observation of 48 male and female two- and three-year olds who pretended to take care of their dolls, the parents, a sophisticated group of professionals, praised the girls with comments such as, "You're such a good mommy," but they failed to encourage similar nurturing behavior in the boys (1994, as cited by Sadker & Sadker). In an interview of boys in kindergarten, researchers heard voices that were sensitive and caring, how much they valued friendship, and were willing to admit feelings of fear. By the end of fourth grade, the same boys' sensitive sides were forced underground as they grew older (1994, as cited by Sadker & Sadker). Mem Fox (1993) believes toughness in girls may need to be encouraged, but tough boys need to have the option <u>not</u> to be tough:

Why is it then that boys aren't allowed to cry? Why is it that ballet

> dancing and painting are seen as less fit occupations for them than being machine gunners, for example, or baseball players? Why should they live, as most of them do, with the idea that it is, in the main, their crippling responsibility to provide for a family when they become grown-up boys? Don't boys and men need liberating, too?

On the other hand, raised to be active, aggressive, and independent, boys enter schools that seem to want them to be quiet, passive, and conforming. Katz and Walsh (1991) believe that gender differences have been attributed to differential sex role socialization pressures on boys and girls. Jordan (1993, as cited by Thorne) proposes that adults should demonstrate to kids that there are a "variety of ways of being male, many of them being admirable" and that "none need depend on being different from and superior to girls and women." Unfortunately, studies show that adults worry about cross-sex behavior for both boys and girls, but parents and teachers believe girls will grow out of male behavior while boys will carry female traits into adulthood (Sadker & Sadker, 1994). Noddings (1991) suggests maybe researchers need to look at another perspective: why do men lag behind women in elementary school teaching, early childhood education, nursing, full-time parenting, and the like? Is there something wrong with men or with the schools that this state of affairs persists? Nodding's comment may suggest what without a gender equitable education, boys will also be shortchanged in their future career choices as they too will not be exposed fairly to traditional female jobs which may interest them.

Synthesis and Analysis

After synthesizing and analyzing the research on the need for gender equity in education, there is an agreement among the literature on the issues of the lack of research on gender equity, the under representation of girls and women in literature and curriculum materials, a need for gender neutral parenting and teaching strategies, and the continued backlash of females in the twentieth century.

A Lack of Research

Throughout all of the studies utilized in the review of the literature, most of the authors pointed out the lack of research on gender equity. Sadker, Sadker, and Steindam (1984) conducted a study of 138 professional articles from 1983 to 1987 on educational reform and found that one author discussed sex differential treatment in classroom interaction and only one percent of the article content pertained to gender equity, and even then it was an afterthought. In addition, the authorative 1,000 page Handbook of Research on Teaching and the 900 page Handbook on Reading Research have no entry in their 1,800 and 1,300 indexes that pertain to sex differences, reading interests, or reading attitudes (AAUW, 1992). It is also important to recognize that the limited research in equity issues found in this review consisted primarily on white, middle class girls and boys. The curriculum in the United States is so focused on males and their western culture, that it is often nicknamed

the PWM (pure white male) curriculum at all levels of education (D'souza, 1991). The effects of race, ethnicity, and social class on gender have not been studied adequately (AAUW, 1992). In addition, no research studies were found that studied people in different ethnic groups and how their cultural beliefs of women in American society effect their gender beliefs. This should be of major importance to future researchers due to the growing multicultural population in the United States. The majority of the research presented on gender equity was at the upper elementary through college levels. Because girls and boys are faced with stereotypes in their world early on, future research and educational programs on gender education must begin as early as preschool. Between 1986 and 1990, Lyn Mikel Brown and Carol Gilligan interviewed one hundred girls between the ages of seven and eighteen years old. Their results showed that younger children spoke in clear, strong, authentic voices and as they grew older, their voices became modulated, softened, and sometimes obliterated (1994 , as cited by Sadker & Sadker). Since sex segregation becomes more pervasive as children get older, many of the contributors believed single-sexed schools or classrooms may be helpful to ensure an equal education for girls; especially in adolescence. Sadker and Sadker (1994) found that gender segregation in co-educational institutions is a major contributor to female invisibility. In classrooms with boys and girls integrated together, sex-segregation occurs when teachers are pulled to the more talkative, more disruptive male sections of the classroom: there the teachers stays, educating boys more actively while the girls fade into the backround. More longitudal studies in the areas of single-sexed classrooms and schools need to be conducted in regards to academic success and self-esteem. It may be hypothesized that until

more research is conducted on the growing gap between boys and girls in education, equity issues will remain a blind spot in educational reform.

The Hidden Curriculum

Throughout the literature, all of the research consistently pointed out the under representation of girls and women in literature books and curriculum materials. The importance of gender fair literature and materials is best described by Dougherty and Engel's (1987) comment on books as socializing influences:

> Picture books play an important role in early sex role socialization because they are a vehicle for the presentation of societal values to the young child. Through books, children learn about the world outside to their immediate environment. They learn about what boys and girls do, say, and feel. They learn about what is right and wrong, and they learn what is expected of children their age. In addition books provide children with role models - images of what they can and should be when they grow up.

Although this statement is the way children's literature and curriculum materials should by portrayed to be gender neutral, the majority of the materials are far from this ideal. Nilsen (1987) stated that despite the fact that girls grow faster and are usually taller than boys the same age, the books consistently showed bigger males doing the more challenging work. Besides a tremendous amount of gender inequality in the content of literature, biases were also found in forms of male oriented illustrations and photographs, an overuse of masculine pronouns in reference to people, animals, and objects (since the english language does not have a neutral pronoun, authors were forced to make an arbitrary decision about noting

gender, which was masculine the majority of the time), exclusive language (such as "freshman" or "mankind"), and the majority of the main characters as boys or males. Nilsen (1987) believes that a substantial influence on the readers interest takes place with that of the sex of the main character in a story. Girls are definitely shortchanged of greater learning experiences in all areas of the curriculum if this is true, as the majority of the literature has male protagonists. Bleakley, Westerberg, and Hopkins (1989) state that the reason girls have greater tolerance for stories in which the main character is a male may be a function of social adaptation to adjust to the world of stories, which seem to be dominated by male main characters. The rationale for the new approach to literacy often termed "whole language" is that real literature can give students increased understandings of themselves and their world (Christian-Smith, 1989). Unfortunately, these worlds in books are often filled with sex, race, and class biases which are important issues that are not being addressed. The selections of children's literature and curriculum materials both excludes, minimizes, and distorts the lives of women and girls which makes this large group in our society seem powerless.

The Need for Gender Equity Education

The research consistently states the need for good role models on gender equality for children by their teachers and their parents. Classroom interactions, both with the teacher and other students, are critical components of educational reform. Research indicates that teachers with training in classroom interaction strategies provided a

more equitable classroom environment (AAUW, 1992). Teacher comments are powerful sources of information that educators need to be aware of: reactions not only affect student learning, they can also influence student self-esteem. Cambell (1991) reports teachers have been found to give boys more praise, more criticism, more remediation, and to be more apt to accept boys responses. She also states that teachers respond more frequently to boys requests for help and talk to boys more about ideas and concepts. All of the research used in this review informs educators that gender equity training programs must take place for novice teachers at the pre-service level and for experienced teachers in the form of inservices. A 1988 article outlining a "model" for human development courses should include the ideas of Watson, Skinner, Piaget, Kohlberg, Freud, and Erikson; all of whom rely on data drawn from male populations in formulating their theories--but not those of Carol Gilligan, famous then and now for her work on the development of women and girls, or those of any other scholars of women's development (1991, as cited by Dempsey & Vandell). If educators are going to be trained, the training models must also be fair and gender neutral.

Parent sex-typing patterns may be a factor in boys eliciting more gender traditional behavior. Katz and Walsh state that several theoretical positions have been stated that fathers may play a more significant role in sex role socialization than do mothers, perhaps by encouraging more sex-differentiating behavior and by putting more pressure on their children to behave in traditional ways. Since sex role patterns develop during the preschool years and remain stable throughout adulthood, by age 2 children have knowledge of sex role stereotypes and that knowledge is positively correlated with children's comprehension of gender identitiy

(Kuhn, 1978, as cited by Collins, Ingoldsby, & Dellman). Thus, in order for the gender gap to lessen, equity education needs to take place at home and the school: parents and teachers need to encourage equal relationships and behavior of their children as soon as possible.

Backlash of Females in the Twentieth Century

Throughout the literature, the research mentions the ongoing backlash of females in the twentieth century in the forms of standardized testing, noncompliance of Title IX, and the invisibility of gender equity verses multicultural equity. In 1991, Robert Bly's Iron John, a book that sold more copies than any other nonfiction piece in America, attempted to reinvent the modern men's movement. Bly wrote:

> The Industrial Revolution in its need for office and factory workers has pulled boys away from their fathers and from other men, and placed them in compulsory schools, where the teachers are mostly women. There boys suffocate under female influence that is not balanced by positive male values (1994, as cited by Sadker & Sadker).

To counter Bly's philosophy, the literature on gender equity continually reinforces that if girls are shortchanged, boys are as well. Without the influence of females, the traditional characteristics of masculinity (aggression, toughness, and strength) may become intensified and distorted (Sadker & Sadker, 1994).

Bias in standardized tests was another issue abundant throughout the review. The research showed that girls perform best on tests with

essay questions and tests which are not timed. Although the CLAS (California Learning Assessment System) test utilizes these techniques helpful to girls and incorporates a subgroup results section on gender, females still scored lower than males in the mathematics, reading, and writing sections of the 1994 test. However, the review of the research did little to suggest alternative forms of assessment to amend this problem. Phyllis Rosser, a leading SAT critic, says, "Standardized tests would be much fairer if items girls do poorly on were eliminated or revised. If boys were scoring lower, they would waste no time rewriting the test (1994, as cited by Sadker & Sadker)." On the other hand, the only disagreement found among contributors was Marica Lin of Berkeley who warns that the process of purging offensive words and themes could reduce questions to the lowest common context, one of bland and neutered words and people (1994, as cited by Sadker & Sadker).

The noncompliance of Title IX was mentioned throughout the literature as being another barrier to equity education for females. Although Title IX prohibits discrimination on the basis of sex in educational programs receiving federal funds, sex equity practices are still not used consistently in the majority of classrooms. Darling and Sorg (1993) believe noncompliance is due to two reasons: (1) discrimination on the basis of sex is difficult to define, much less prove and (2) classroom teachers may unconsciously help perpetuate sex-role stereotypes. Title IX's impact in regard to vocational education has been more liberal in the direction of providing opportunities for students who seek non-traditional careers, rather than in the direction of a substantive restructuring of gender roles and attitudes (1992, as cited by Murdaugh & Rebell). The research seems to be in agreement that Title IX's intentions

are good, but without legislation and compliance, the teachers will be the key who have the potential to affect the self-esteem and goals of the students.

Another issue that seems to make gender equity invisible, thus hurting females and males, is the lack of attention it is given compared to multicultural equity in schools. There have long been differences between white students and those of other races regarding the knowledge made available to them, the materials they receive, and the interactions between themselves and school personnel (Christian-Smith, 1989). Despite the extensive statutory requirements and guidelines on gender issues in curriculum, there is little indication that school districts have responded in a thorough-going manner. It does not appear that school districts in states with "mandatory" approaches have acted in a manner substantially differently from districts in states with permissive statutes or with no statutes at all (Murdaugh & Rebell, 1994). Sadker and Sadker (1994) ask educators to look at a snapshot of a typical classroom: An all girl line and an all boy line, a high school math class, and a football team with cheerleaders. Then substitute white and black for male and female. Segregation would scream out: the racial inequity in this picture would be unacceptable. But gender inequity is not even noticed. All of the research is in agreement that gender equity has been a hidden agenda in all educational issues too long; it must be addressed and taken as seriously as any other reform movement.

Conclusion

In conclusion of the research presented, there is a definite need for educational reform to lessen the already large gender gap in our society to rid the curriculum and classrooms of sex role stereotypes in order to provide equitable education for girls and boys. Schools are seen as pivotal areas for study and intervention since they are believed to be the institutions which offer the most hope for social change (Purcell-Gates, 1993). With many outside influences that generate biased stereotypes, the classroom is an effective environment that may counterbalance societal influences that students experience daily outside of school. Providing a gender fair learning environment, teacher training, new forms of assessment, and contemporary research will all aid in making gender equity a priority in educational reform.

Providing a Gender Neutral Learning Environment & Curriculum

Implementing a gender neutral learning environment where the classroom interactions, curriculum materials and literature, and real life learning experiences are free of gender bias. Sadker and Sadker (1988) stress that curriculum materials and literature should be inclusive and not exclusive, incorportate the interests, experiences, and contributors of females. If teachers are given more freedom in making curricular decisions, they can get away from materials which may be biased and give sex fairness a high priority in their educational goals. The use of

bibliotherapy with children's literature that is gender neutral can facilitate a child's identification with and exploration of sex role behavior (Pardeck & Pardeck, 1985). Incorporating the strategy of bibliotherapy with literature that portrays characters who reflect the changing gender roles in our society can free students to identify with these characters and allow them to explore his or her own sex role. The use of androgynous characters in children's literature is another goal toward eliminating the concept that sex roles are bipolar. This type of language may enhance the sex role development of the students and help them to be more attuned to changing gender roles. In addition, providing students, especially girls, with more real life experiences with people in atypical careers for their gender, may change the images of these professions to reflect the diversity of these fields. Avoiding career segregation and stereotyping is essential for gender equality in social studies. Active involvement of parents, teachers, and the community in the educational process of equality is needed. By emphasizing career exposure and having students talk with real people, the stereotypical images in the curriculum and most of the literature books may be counteracted.

Teacher Training

In addition, teachers must be prepared to include all students fairly in classroom interaction. This can be accomplished by educating both novice and experienced teachers on equity as a dominant theme in education. Dempsey and Vandell (1991) feel that educator training reform should include restructuring, curriculum reform, classroom dynamics, staff

development for educators, recruitment, advancement, empowerment, accreditation, certification, and teacher pay. Individual states also need to be encouraged to develop a tailored framework on gender equity in order to provide educators with a guide on how to integrate gender fair strategies in their curriculum. A state framework may also influence districts to make teachers accountable for practicing a gender fair education in their classrooms (maybe as a part of the state's Program Quality Review). Teacher education also needs to encourage women and men to research more topics on gender equity. In a research study of 138 articles concerned with equity, Sadker, Sadker, and Steindam (1989) found that fewer than 10 percent of the articles analyzed had been authored by teachers or administrators. Their findings suggest that gender equity had been relegated to a minor role in improving their field.

New Forms of Assessment Needed

Since so many scholarships, honorary awards, and academic advancements depend upon standardized test scores, new forms of unbiased assessment should be an essential part of reform. Researchers need to investigate, both within the structure of standardized tests and within the educational process, why females score below males. Educators must also try to find answers about the contradiction between girls' higher report card grades and lower standardized tests scores. Sadker and Sadker (1994) conclude that:

> Poor test performance can be hidden from others but not from the test takers themselves. A low score is a lifelong brand, a never-ending reminder of intellectual weakness; it is a stop sign, quietly directing students away from prestigious programs and demanding careers and

steering them instead on a path of lower expectations and fewer choices.

If gender equity is to be actively taught in all educational institutions, new or reformed tests need to be developed.

More Research

It is concluded that more research is needed in order to understand the importance of gender equity in education and enable it to become a priority of reform issues. Longitudal studies on separate-sex classrooms and schools needs more research in order to see which type of environment females flourish in when learning. Although half of America's classrooms are sex segregated - in classroom seating, work groups, and informal interactions - educators and the public seem unaware of this gender line or its implications (Sadker, Sadker, & Steindam, 1989). There are boys' areas and girls' areas' of the classroom, but more research needs to be conducted longitudally in order to know enough about the impact of this informal gender separation. Rebel and Murdaugh (1992) also agree that the continued validity of well-designed single-sex programs as an option for many local school districts may simply not be well known or fully understood. The effects of gender fair programs in early education also needs to be addressed with more research. The key to making a real difference in girls lives is to get equity concepts infused into the core curriculum at an early age. Simbol (1989) believes that the universities are working to break down sexual stereotypes and inequity, but can accomplish little once students have experienced 19 years of

sexist education. The task of opening minds to gender-free thought and behavior must begin as early as preschool. Outside influences such as the effects of parent attitudes on their children before they enter their formal education and how the media also influences these children with stereotypes needs more research. Sadker and Sader (1994) feel the following African proverb reinforces the need of not only educators, but society as well to value and uphold gender equity:

> It takes a whole village to educate a child: grandparents and parents, teachers and school administrators, lawmakers and civic leaders.

When all these citizens from our American village join forces, they can transform our educational institutions into the most powerful levers for equity, places where girls are valued as much as boys, daughters are cherished as fully as sons, and tomorrow's women are prepared to be full partners in all activities of the next century and beyond (Sadker & Sadker, 1994).

Recommendations

There are several recommendations for educators and parents, schools, researchers, and the community to help lessen the gender gap so our future generations of students may have an equal education free of biases.

Teachers and Parents

Teachers and parents need to be inserviced about how to address the formal and hidden curriculum when it is gender biased. In addition, they need to work as a team to influence future students in hope that they will choose to oppose their society's sexist standards and develop a critical consciousness instead of a consciousness based upon commercialism and traditional values. Once educators are aware of their gender biased teaching patterns, they are motivated to change. However, their training usually does not equip them with adequate knowledge and skills. Counter-teaching strategies and training on sexism need to address sex, race, and social class stereotyping as criterias for selecting curricular materials and literature. Dunne and Faith (1989) make six recommendations for teachers to help prepare their students to deal with gender biases:

(1) Teacher education programs should provide prospective teachers the opportunity to study classroom dynamics, their own and others, in order to eliminate bias in classroom comunication.

(2) Novice teachers should have guided exposure to text materials containing sex stereotypes so that they become aware of the messages conveyed by the school environment and can supplement present textbooks or choose new ones more judiciously.

(3) Methods courses should incorporate research findings on the biasing effects of teaching methods and how to counteract those effects.

(4) Courses on curriculum should include resources that will help preservice teachers promote equal participation and achievement in their teaching fields.

(5) Teacher educators should be familiar with the Handbook for

Achieving Sex Equity Through Education (Klein, 1985).

(6) Teacher educators must model what they teach.

It is recommended, as suggested by the literature, that educators begin their gender equity training in classrooms as early as preschool. Parents also need to provide their children with a model of social equity, for the agenda of sexism is advanced and supported within the larger social structure (Simbol, 1989).

School Districts

Another recommendation is that gender equity needs to be incorporated into all school programs. The development of potential in students requires a flexible school program that encourages exploration, inquiry, and risk-taking (Riles, 1993). School districts and their administrators can achieve this by using discretionary funds to provide inservice training so educators can identify and correct any biased teaching practices. All school districts also need to address the discrepancy between report card grades and standardized tests. Since biased tests are prohibited by Title IV of the Educational Amendments of 1972, other assessment measures, including standardized tests, highlight the need for gender equity in schools. In additon, school districts need to enforce Title IX by expanding the power of their district's Title IX coordinator to include mandatory accountability of (1) gender fair teaching practices and materials are used throughout the curriculum and (2) gender equity is included and followed in the district's grade level

expectancies. Unfortunately, many educators are unaware that each district must have a Title IX coordinator to oversee sex discrimination issues. Once gender equity is viewed as seriously as multicultural education in districts, then Title IX may get serious attention and support.

Other Educational Agencies

More research on gender equality needs to be addressed and conducted on the educational and national level if the gender gap is going to lessen. When A Nation at Risk was published in 1983 by the U.S. Department of Education to promote school reform across the country, most of the reports did not define the educational issues under review in terms of gender, nor did they include sex as a separate category in their data analysis and backround information (AAUW, 1992). In addition, publishers need to follow and be accountable for Title IX's standards on equitable treatment and representation of females in literature and texts. Much textbook content is dictated by the decisions of a few large-scale national publishers who may or may not represent females fairly (Murdaugh & Rebell, 1992). Future research by other educational agencies must attempt to make gender equality a major issue in educational reform if change will take place.

The Future

More than 55 percent of American workers are women, and by the year 2,000, only one of every seven new employees will be a white male (Riles, 1993). Riles (1993) argues in light of this reality, the question for every

woman is not whether she is going to work, but at what. The question "at what" may depend largely on the kind of encouragement girls and young women receive in their educational setting.

Tsongas (1991, as cited by Campbell) reminds educators that "Equal opportunity is more than an open gate. It is the appropriate complement of skills and fundamental self esteem that makes the open gate meaningful. To just open the gate is to engage in a cruel gesture, no matter how innocently it is done." The gate is opening and much knowledge is there. It is up to the parents, educators, schools, and society whether girls are offered a real chance in order for the gender gap to close.

Appendix

Gender Fair Training

EQUALS

Provides educator training seminars on encouraging participation and achievement of women and minority students in mathematics. Contact EQUALS, Lawrence Hall of Science, University of California Berkeley, California 94720; (415) 642-1823.

EQUITY ASSISTANCE CENTERS

Offer gender equity workshops. There are 10 federally funded centers nationwide. To locate your regional center, contact Susan Shaffer, Director, Gender Equity Program, Mid-Atlantic Equity Center, American University, Washington, CC 20016; (202) 885-8536.

GESA (Gender/Ethnic Expectations and Student Achievement)

Provides training, peer evaluation, and observation of classroom dynamics. Contact Gray Mill consulting, 2029 352nd Place, Earlham, IA 50072; (515) 834-2431.

MYRA AND DAVID SADKER

Provide workshops on correcting gender inequity for educators and community and business groups. Contact Myra and David Sadker, School of Education, American University, Washington, SC 20016; (202) 885-3728.

SEED (Seeding Educational Equity and Diversity)

Provides funds on a matching-grant basis to local school districts for training teachers to conduct ongoing faculty reading groups related to gender and multicultural equity. Contact National SEED Project, Center for Research on Women, Wellesley, MA 02181; (617) 431-1453.

Resources

AAUW (American Association of University Women)

An association at the international, national, state, and local levels that promotes equity for women, education, and self-development over the life span, and positive societal change. AAUW Educational Foundation provides funds to advance education, research, and self-development for women and to foster equity. AAUW's Legal Advocacy Fund provides funding and a support system for women seeking judicial redress for sex discrimination.

For information on membership, gender fair publications, reports, teacher fellowships, and grants, write American Association of University Women, 1111 Sixteenth Street N.W., Washington, DC 20036; (800) 821-4364.

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